

cartilage or bone inducing activities as a mature protein encoded by the nucleotide sequence of SEQ ID NO:1.

21. The antibody according to claim 20, wherein said antibody is a monoclonal antibody.

22. An antibody or antibody fragment according to claim 20, which specifically binds to a protein of the TGF- β family wherein said protein comprises the amino acid sequence according to SEQ ID NO:3.

23. The antibody according to claim 22, wherein said antibody is a monoclonal antibody.

24. An antibody or antibody fragment which specifically binds a protein of the TGF- β family, wherein said protein is encoded by a DNA comprising a nucleotide sequence selected from the following group:

- (a) the nucleotide sequence as shown in SEQ ID NO:2,
- (b) a nucleotide sequence which is degenerate as a result of the genetic code to the DNA of (a),
- (c) a nucleotide sequence which hybridizes under the following stringent hybridization conditions to the DNA in (a), or (b): hybridization at a salt concentration of 4X SSC at 62°-66°C followed by a one-hour wash with 0.1X SSC and 0.1% SDS at 62°-66°C, and

(d) fragments of (a), (b) or (c) which encode a protein which has essentially the same cartilage or bone inducing activity as a mature protein encoded by the nucleotide sequence of SEQ ID NO:2.

25. An antibody or antibody fragment according to claim 24, wherein said protein comprises the amino acid sequence according to SEQ ID NO:4.

26. The antibody according to claim 25, wherein said antibody is a monoclonal antibody.

27. The antibody according to claim 24, wherein said antibody is a monoclonal antibody.

28. A method for detecting a protein of the TGF- β family, comprising incubating an antibody or antibody fragment which specifically binds to a protein of the TGF- β family with a sample suspected of containing said protein, and detecting any antibody/protein complex formed as an indication of the presence of said protein,

wherein said protein is encoded by a DNA comprising a nucleotide sequence selected from the following group:

- (a) the nucleotide sequence as shown in SEQ ID NO:1,
- (b) a nucleotide sequence which is degenerate as a result of the genetic code to the nucleotide sequence of (a), and

(c) fragments of (a) or (b) which encode a protein which has essentially the same cartilage or bone inducing activities as a mature protein encoded by the nucleotide sequence of SEQ ID NO:1.

29. A method for detecting a protein of the TGF- β family, comprising incubating an antibody or antibody fragment which specifically binds to said protein of the TGF- β family with a sample suspected of containing said protein, and detecting any antibody/protein complex formed as an indication of the presence of said protein,

wherein said protein is encoded by a DNA comprising a nucleotide sequence selected from the following group:

- (a) the nucleotide sequence as shown in SEQ ID NO:2,
- (b) a nucleotide sequence which is degenerate as a result of the genetic code to the DNA of (a),
- (c) a nucleotide sequence which hybridizes under the following stringent hybridization conditions to the DNA in (a), or (b): hybridization at a salt concentration of 4X SSC at 62°-66°C followed by a one-hour wash with 0.1X SSC and 0.1% SDS at 62°-66°C, and
- (d) fragments of (a), (b) or (c) which encode a protein which has essentially the same cartilage or bone inducing activity as a mature protein encoded by the nucleotide sequence of SEQ ID NO:2.

30. A kit for detecting a protein of the TGF- β family, comprising

an antibody or antibody fragment which specifically binds to a protein of the TGF- β family, and

a reaction buffer,

wherein said protein is encoded by a DNA comprising a nucleotide sequence selected from the following group:

(a) the nucleotide sequence as shown in SEQ ID NO:1,

(b) a nucleotide sequence which is degenerate as a result of the genetic code to the nucleotide sequence of (a), and

(c) fragments of (a) or (b) which encode a protein which has essentially the same cartilage or bone inducing activities as a mature protein encoded by the nucleotide sequence of SEQ ID NO:1.

31. A kit for detecting a protein of the TGF- β family, comprising

an antibody or antibody fragment which specifically binds to a protein of the TGF- β family, and

a reaction buffer,

wherein said protein is encoded by a DNA comprising a nucleotide sequence selected from the following group:

(a) the nucleotide sequence as shown in SEQ ID NO:2,

(b) a nucleotide sequence which is degenerate as a result of the genetic code to the DNA of (a),

(c) a nucleotide sequence which hybridizes under the following stringent hybridization conditions to the DNA in (a), or (b): hybridization at a salt concentration of